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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,367	11/14/2005	Jeroen J. Crevecœur	4662-306	1185
23117 7590 03/03/2010 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
WOODWARD, ANA LUCRECTIA				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
03/03/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/523,367

Applicant(s)

CREVECOEUR ET AL.

Examiner

Ana L. Woodward

Art Unit

1796

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 5-8 and 10-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5-8, 10-17 and 19-26 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 16 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 is indefinite for depending upon a cancelled claim.

Claim 17, assuming it was meant to depend upon claim 1, does not further limit the subject matter set forth by the base claim.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5-8, 10-15 and 19-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 3,966,839 (Sims) in view of U.S. 5,804,638 (Hayashi et al) and U.S. 2003/0162900 (Joachimi et al).

Sims discloses homogeneous blends comprising about 99 to 1% by weight of polyamide (meeting applicants' polyamide), about 1 to 99% by weight of vinyl aromatic resin (embracing applicants' SAN copolymer) and about 0.1 to about 5% by weight of copolymer of vinyl aromatic monomer and maleic anhydride (meeting applicants' SMA copolymer), the latter based on total weight of the polyamide and vinyl aromatic resins. Suitable vinyl aromatic resins include styrene-acrylonitrile copolymers, i.e., applicants'

SAN copolymer (column 2, lines 55-61). Suitable copolymers of vinyl aromatic monomer and maleic anhydride include copolymers containing 50 to 75 mole% styrene (and 50 to 25 mole% maleic anhydride) (column 3, lines 4-7). In addition, the composition may contain additives such as pigments and the like (column 4, lines 38-41).

In essence, the disclosure of Sims differs from the most basic claim (claim 8) in not expressly disclosing black polyaniline and carbon black as the pigments. Hayashi et al teach that it is well known in the art to use a combination of nigrosine, aniline black and carbon black (in amounts falling within the scope of the present claims) as the coloring agent for polyamides, said coloring agent providing a uniformly blackened composition good in appearance, surface gloss, mechanical properties and light fastness. The composition of Hayashi et al is analogous to that of Sims in that polyamide/styrene acrylonitrile copolymer alloys can be used (column 3, lines 13-15). Accordingly, it would have been obvious to one having ordinary skill in the art to have employed the well known coloring agent combination of nigrosine/aniline black/carbon black, as taught by Hayashi et al, as the optional pigment in the polyamide composition of Sims for its expected additive effect and with the reasonable expectation of success. In this regard, it is again noted that it is within the scope of Sims' general disclosure to further incorporate pigments into his composition. Accordingly, absent evidence of unusual or unexpected results, no patentability can be seen in the presently claimed subject matter.

As to claim 1, Sims further differs in not expressly showing a blend embodiment that comprises applicants' specific SAN and SMA contents. It is maintained, however, that it is within the scope of Sims' general inventive scope to use up to 5 weight%, relative to the polyamide amount, of a combined total of the SAN and SMA copolymers with the reasonable expectation of success. In this regard, it is again noted that the SAN copolymer content can be as low as about 1% by weight of the blend and the SMA copolymer content can be as low as about 0.1% by weight of the combined amount of polyamide and SAN. Accordingly, absent evidence of unusual or unexpected results, no patentability can be seen in the presently claimed subject matter.

As to claim 5, while Sims does not expressly disclose either the relative viscosity or amine end group concentration of the polyamide, patentee does disclose that the polyamides typically have an average molecular weight of about 5,000 to 25,000 and preferably are amine terminated so as to react with the maleic anhydride group of the copolymer (column 2, lines 51-55, column 3, line 13-18).

With regard to the claims requiring the production of a product via a welding technique, it is maintained that it would have been obvious to one having ordinary skill in the art to have employed the polyamide composition of Sims comprising the coloring agent of Hayashi et al, in a welding process, as per Joachimi et al, in accordance with the ultimate product and application desired. In this regard, it is noted that Joachimi et al disclose that polyamide compositions are useful in the production of welded products.

Regarding claim 19, it is reasonably believed that the SMA and SAN copolymers of Sims would be miscible with one another given that that a homogeneous blend is engendered.

Allowable Subject Matter

4. Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record neither anticipates nor renders obvious the additional use of a low density polyethylene to the polyamide composition.

Response to Amendment

5. Applicants' amendments filed February 16, 2010 have effectively overcome the previous 35 U.S.C. 103 rejection based on WO 02066558.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana L. Woodward whose telephone number is (571) 272-1082. The examiner can normally be reached on Monday, Tuesday, Thursday and Friday (7:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ana L. Woodward/
Primary Examiner
Art Unit 1796